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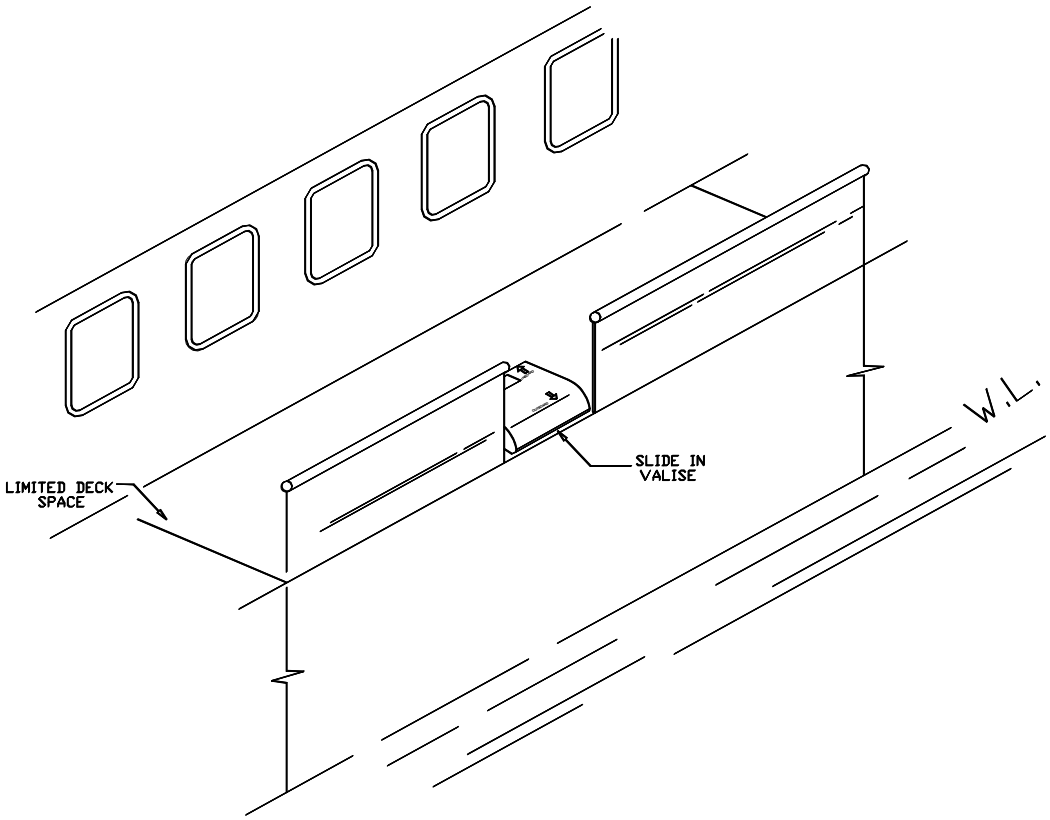


Figure 1.1 - Slide unit (in Valise) on deck.

1.0 INTRODUCTION:

The DBC Modular Slide System (MSS) is an efficient, easy to use, flexible and cost-effective means of rescue system for low freeboard vessels. The MSS combines a 100/150 Person Inflatable Buoyant Apparatus (IBA) or a 50/75 Person (IBA) with an Inflatable Slide.

The slide comes in three different models: a 2.5m freeboard model (SL25), a 3.2m freeboard model (SL32) and a 4.0 m freeboard model (SL40). The system is modular, enabling the operator to stow the slide separate from the IBA. The slide is packed in a durable, bright red fabric valise. As a modular and flexible system the DBC MSS evacuates all passengers, including the elderly and handicapped, with the utmost safety in the shortest possible time. In case a passenger needs to deploy the system, it is clearly marked with instruction labels.

2.0 COMPONENT DESCRIPTION (STOWED)

The MSS is designed to be stowed separately from the IBA (usually inside the vessel, close by the evacuation station) and is ideal for those vessels with limited deck area.

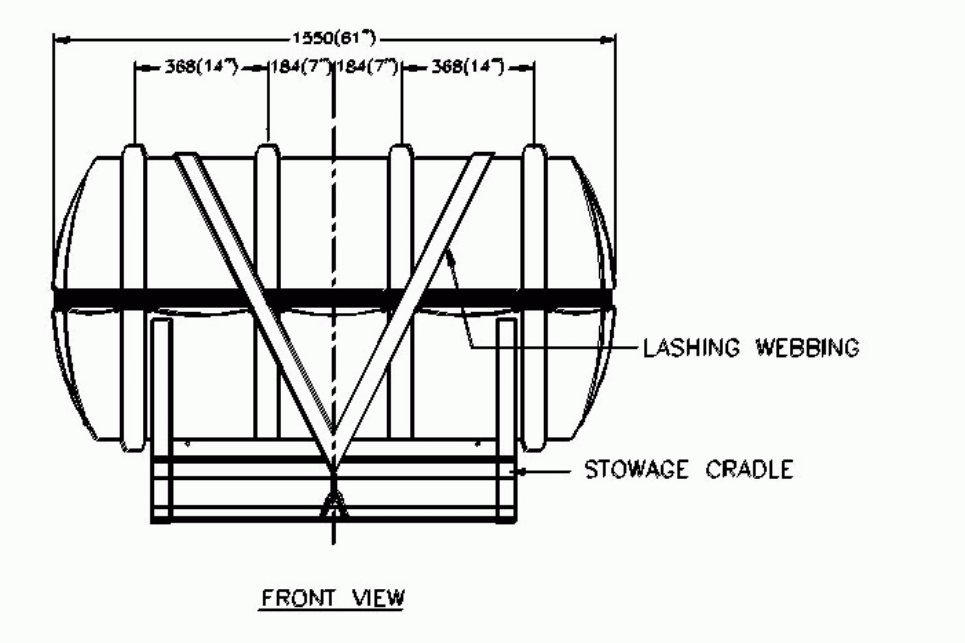


Figure 2.1 - IBA unit, Stowed on deck (Front View)

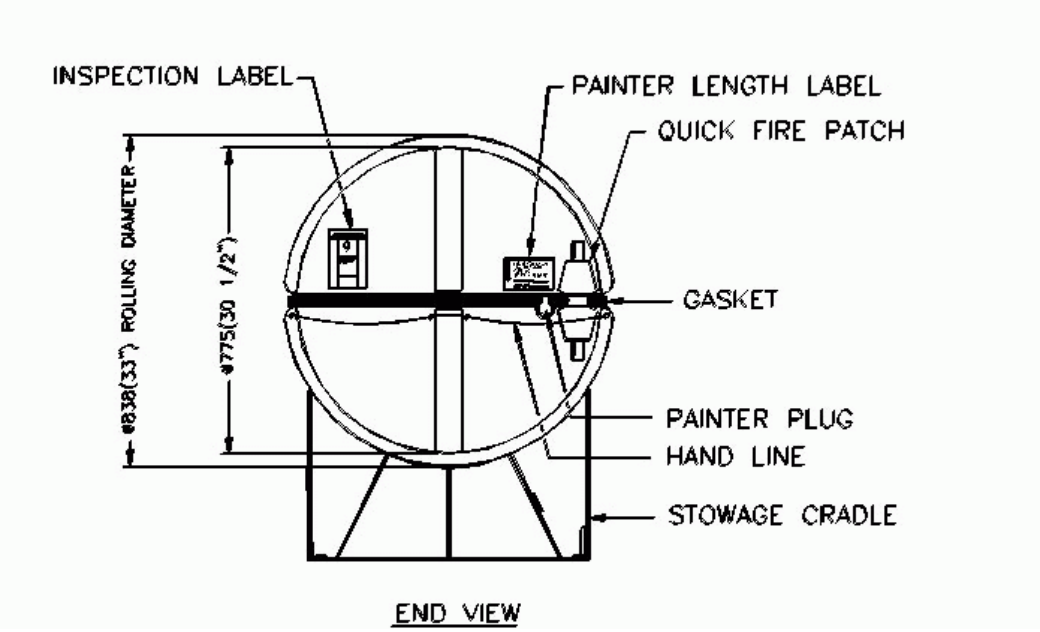


Figure 2.2 - IBA unit, Stowed on deck (End View).

The IBA is packed in a fiberglass canister, and stowed on deck in a stowage cradle (an example is shown in Figures 2.1 and 2.2)

The Slide is packed in a fabric valise (as shown in Figure 2.3). The particulars of the valise pack are as following:

(Please note that these dimensions may vary, depending on how well the slide is packed.)

SL40 model:
L=1220 mm (4ft.) W=610 mm (2ft.) H=305 mm (1ft.) WT=47kg. (104 lb.)
SL32 model:
L=1220 mm (4ft.) W=610 mm (2ft.) H=305 mm (1ft.) WT=45kg. (99 lb.)
SL25 model:
L=1145 mm (45in.) W=535 mm (21in.) H=305 mm (1ft.) WT=37kg. (82 lb.)

Figure 2.3 - Slide unit shown packed inside valise.

The valise has clearly marked arrows identifying the inboard and outboard directions, for quick and precise positioning of the slide at the evacuation station (Figure 2.3).

Figure 2.4 - Slide in valise (shown being transported to Evacuation Station.

The valise also has a handle for carrying convenience, enabling the slide to be easy transported to the evacuation station. It's narrow dimension (305 mm -1ft.), makes it convenient for a crew member to transport the valise in narrow aisles or crowded locations.

The slide is also equipped with attachment lines.

Figure 2.5 - Slide in valise (attachment line detail shown)

The attachment lines have snap hooks at their ends. They sit in a Velcro fitting on either side of the valise (Figure 2.5). These lines are to be attached, prior to the inflation of the slide, to the deck fittings (pad eyes) provided at the evacuation station.
The attachment lines will ensure that the slide will be secured to the deck during the emergency evacuation.

Figure 2.6 - Slide in valise (Snap hook detail shown).

To secure the attachment lines connect the snap hooks, to the deck pad eyes (Figure 2.6).

The DBC Modular Slide features ready accessible inflation line. The inflation line is inside a clear marked pocket on top of the slide (Figure 2.7 and Figure 2.8).

Figure 2.7 - Inflation Line Pocket(Closed - Stowed Position).

Figure 2.8 - Pocket Open(slide ready to be inflated).

The inflation line (sometimes referred also as the “Quick Fire” line) is approximately 1520 mm long (5ft.). However, the inflation line will activate the slide after pulling only 460 mm (1.5 ft.) (Figure 2.9).

Figure 2.9 - Inflation line activate (View from Outboard).

Once the inflation line is activated, the slide will inflate outboard, deploying into the ready IBA.

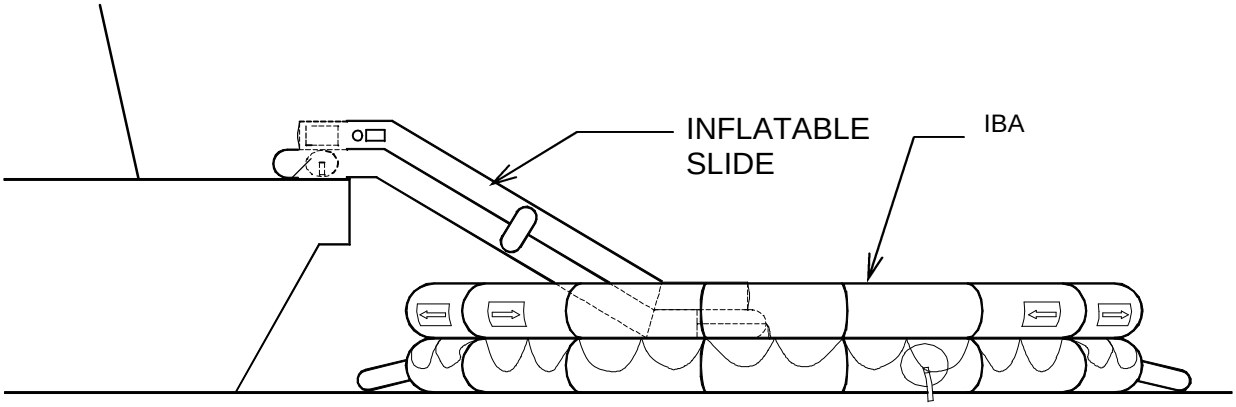


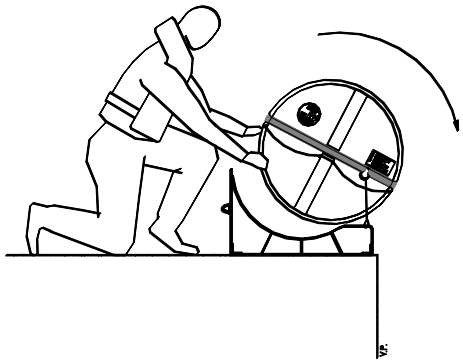
Figure 2.10 - Side View of Slide and IBA

Figure 2.11 - System Ready for Evacuation

3.0 HOW IT WORKS:

The IBA and slide are stored separately one from another. The valise with the slide is stored inside the vessel. The IBA canister is usually stored in a cradle on deck.

While it is up to the vessel operators to formulate the exact evacuation procedure DBC offers the following guidelines. Please note that the following instructional steps may vary from vessel to vessel.



Step 1.

Prior to deployment confirm that there is nothing on the ships' side or floating on the ocean surface that would interfere with the IBA deployments. Also, ensure that the IBA painter line is secured to a strong point on the ship.

During an emergency, after the "Abandon Ship" signal is given, a crew member will first deploy the IBA from it's storage cradle (Figure 3.1).

Figure 3.1 - Side View of Crew Member Deploying IBA

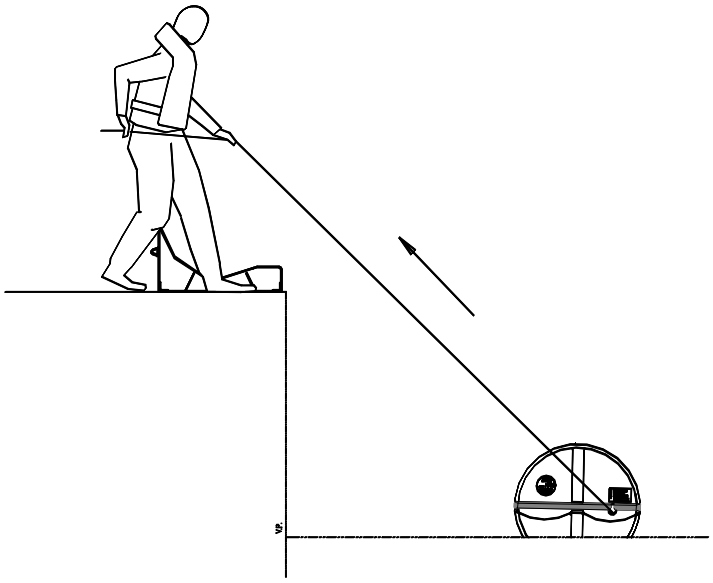


Figure 3.2 - Crew Member Inflating IBA (Stage I)

The canister will fall into the water and will stay intact until inflation.
During the preparation of the system it is advised to keep the mustering passengers aside of the evacuation station. This will enable the crew to work more effective.

Step 2.

The next step is to pull on the Painter line and inflate the IBA (as shown in Figure 3.2 and 3.3).

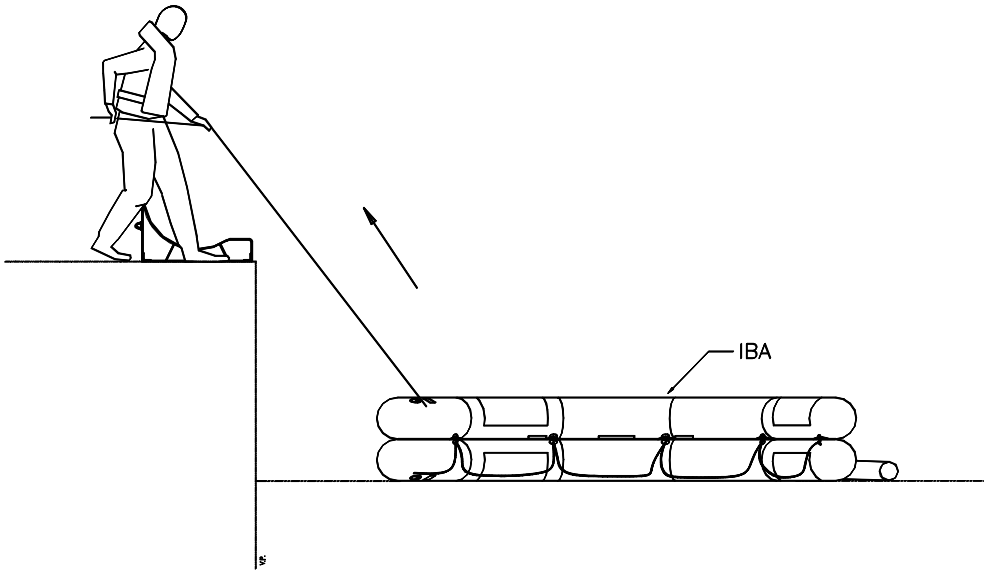


Figure 3.3 - Crew Member Inflating IBA (Stage II)

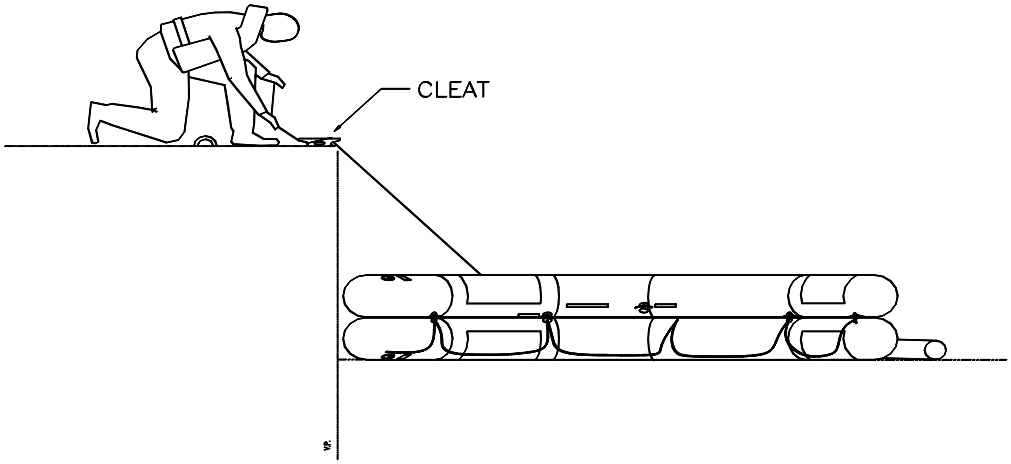


Figure 3.4 - Bowsing the IBA (Pull as tight as possible and tie to cleat)

Step 3.

After the IBA is fully inflated, the crew member will bowse the IBA tightly to the side of the ship.This is done by bringing the IBA as close as possible to the side of the ship and then securing the line to the deck cleat (Figure 3.4).

Step 4.

Position Slide unit at the evacuation station. Ensure that Slide is centered in line with the IBA, and that the *"OUTBOARD"* arrow label on the valise points to the outboard of the ship (Figure 3.5). Pay particular attention to this step as this is the direction of inflation for the slide. If this step will be overlooked, the slide will inflate towards the vessel instead of away from it.

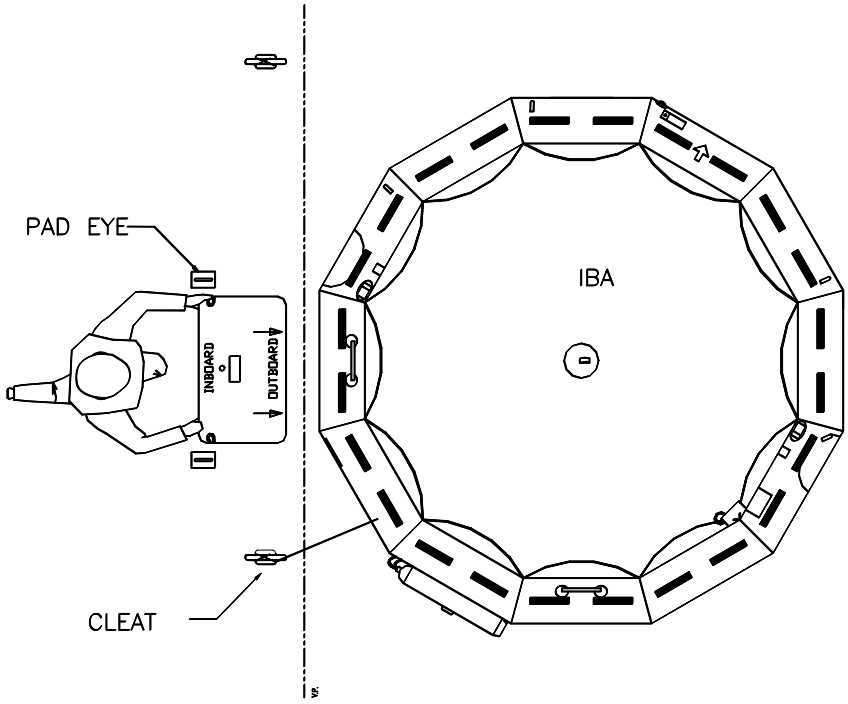


Figure 3.5 - Positioning the Slide according to the Inboard/Outboard labels.

Step 5.

Once the slide is positioned according to the Inboard/Outboard labels, secure the Slide attachment lines. This is done by connecting the snap hooks located on either side of the slide to the deck fittings provided (Figure 3.6). Again this step is important for the proper operation of the slide.

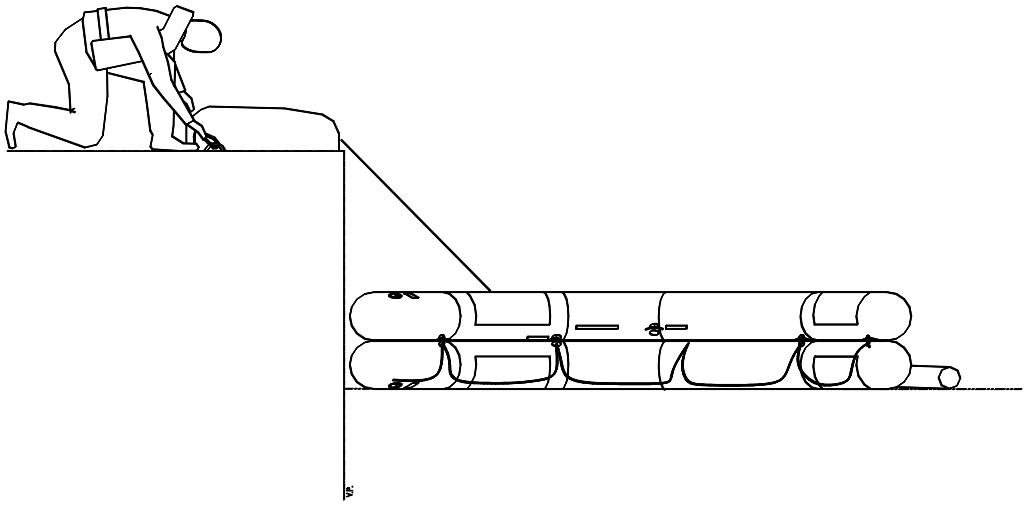


Figure 3.6 - Securing the attachment lines.

Once the slide is positioned correctly, and the attachment lines are connected, the slide is ready for inflation.

Step 6.

Open the pocket clearly marked “INFLATE” (refer to Figures 2.7 and 2.8). Pull on inflation cord by jerking sharply on the line (Figure 3.7). The Slide will inflate towards the IBA, having one end tied to the ship (by the attachment lines), and the other end resting inside the IBA.
Make sure that the IBA and slide line up on the center line of the IBA. If the system needs to be aligned, this can be done by adjusting the IBA bowsing line by slacking it or tightening it.

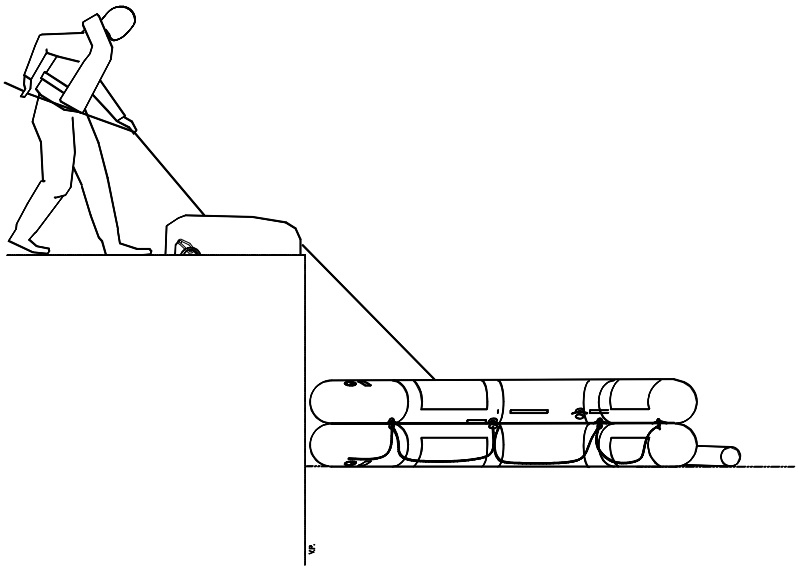


Figure 3.7 - Inflating the slide

At this point the System is ready for descent.

Step 7.

After ensuring that the IBA took full shape and looks ready to be boarded, the first crew member shall descend the slide into the IBA (Figure 3.8). The way to descend the slide is to sit on the edge of the slide, rest the elbows on the slide rails, and slide down. During the descent it is advised to keep the heels up, sliding mostly on the bottom.

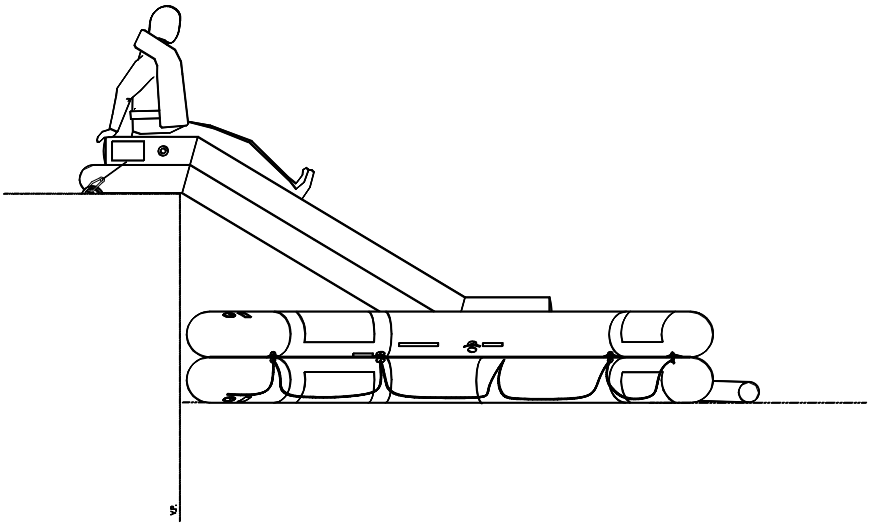


Figure 3.8 - Descending the slide

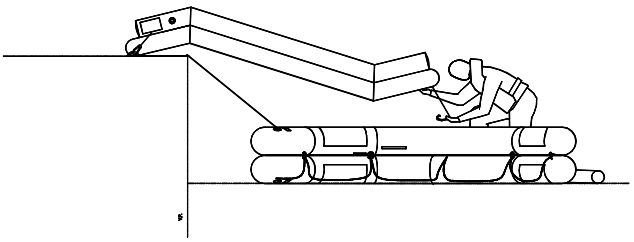


Figure 3.9 - Connecting the slide to the IBA

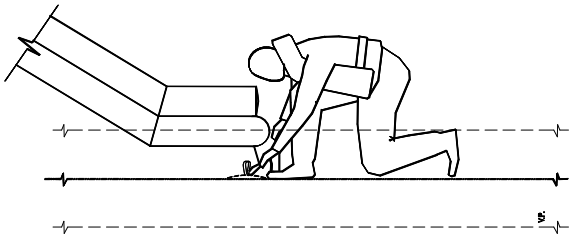


Figure 3.10 - Connecting the slide to IBA - Secure Snap hook to IBA Fitting.

Step 8.

After descending into the IBA the first crew member shall prepare the slide for evacuation. This consists of connecting the slide to the IBA (Figure 3.9 and 3.10), transferring additional mooring lines (bowsing lines) from the IBA to the ship (Figure 3.11) and visually inspecting the IBA.

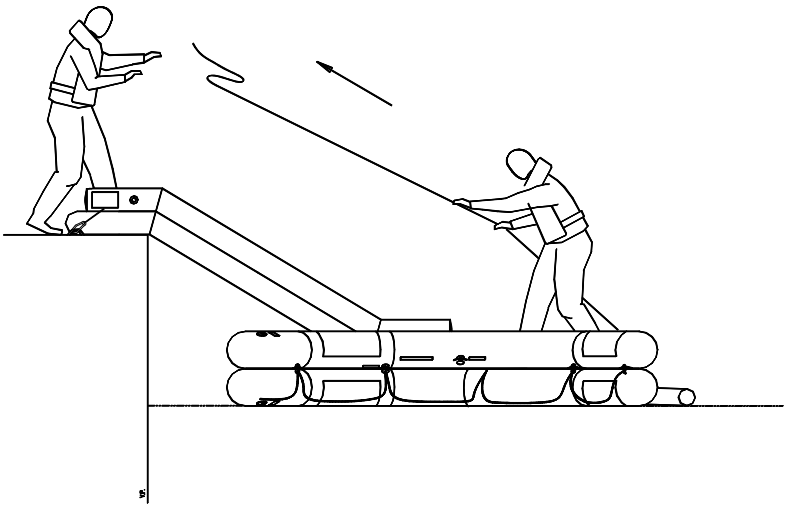


Figure 3.11 - Transferring additional bowsing lines from the IBA.

To connect the slide to the IBA, attach the snap hook located on the bottom of the slide to the attachment fitting in the center of the IBA (Figure 3.10). Transfer additional bowsing lines to the ship and have other crew members secure it. This will make the IBA more stable along side of the vessel, once the passengers are evacuated. Visually inspect the IBA to ensure that is fully inflated (each buoyancy fully pressurized) and that is ready to be boarded by passengers.
The IBA can now be used either on its own, or as a transfer platform of passengers to additional IBA's.

If your vessel has only one IBA per side skip to "STEP 9".
If your vessel carries multiple IBA's per side, proceed to the following steps.

At this stage, for larger capacity vessels that carry more than one IBA per slide, the crew will have to deploy additional IBA's, bowse them to the first IBA, and inflate them (Figure 3.11A). Once the second IBA is inflated, muster the passengers by the evacuation station wearing life jackets, have them remove shoes and be ready for evacuation.

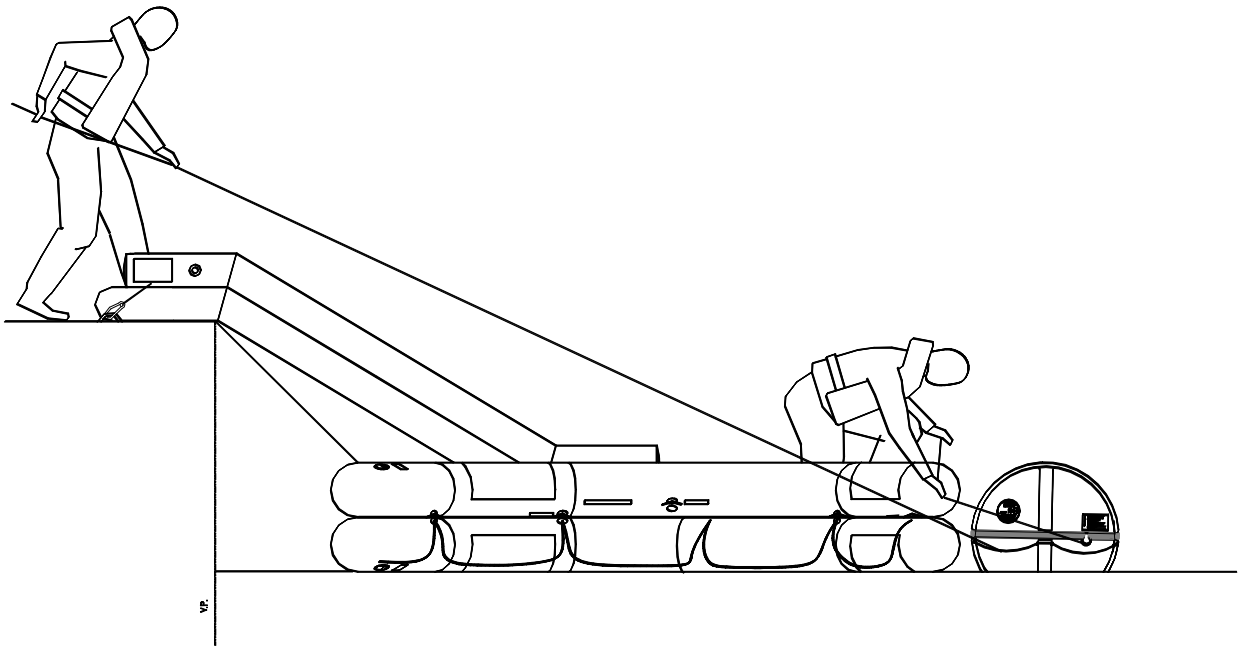


Figure 3.11A - Bowsing additional IBA's (for vessels that carry more than one IBA per side).

In the case of multiple IBA's, the first IBA will be used as a transfer platform to the outboard IBA and will be filled last (Figure 3.11B and 3.11C). The outboard IBA will be filled first and when full, will be cut away from the system (Figure 3.11D). Any additional IBA will be deployed, bowsed to the first IBA and inflated, repeating the previous step.

IMPORTANT:
In the case of multiple IBA's, the system will have no more than two (2) IBA's fully inflated at any time. Additional IBA's can be deployed and tethered standing by the two inflated IBA's in order to speed up the evacuation (Figure 3.11E).

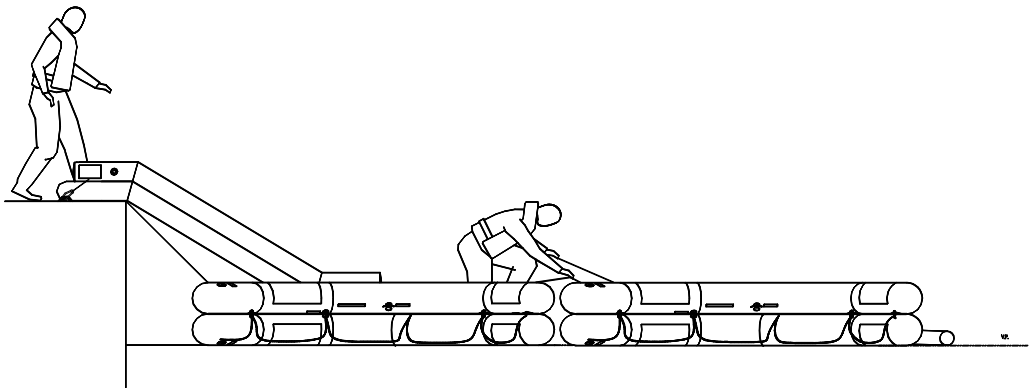


Figure 3.11B - Inflating an additional IBA (for vessels that carry more than one IBA per side).

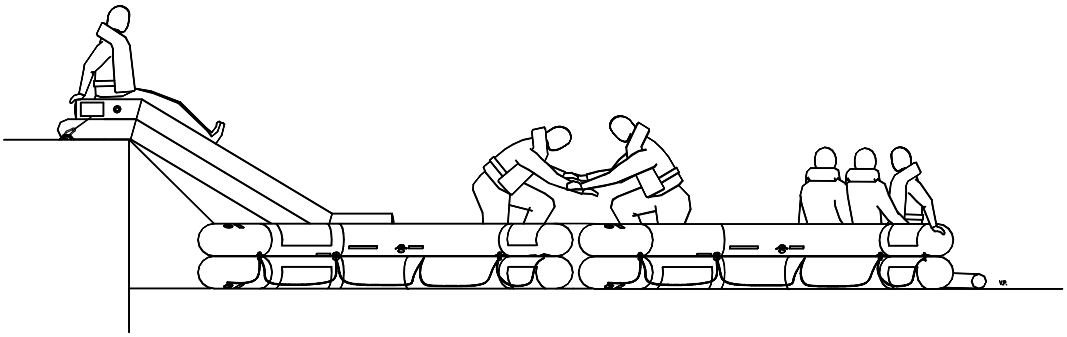


Figure 3.11C - Filling the outboard IBA first, using the inboard one as a transfer platform (for vessels that carry more than one IBA per side).

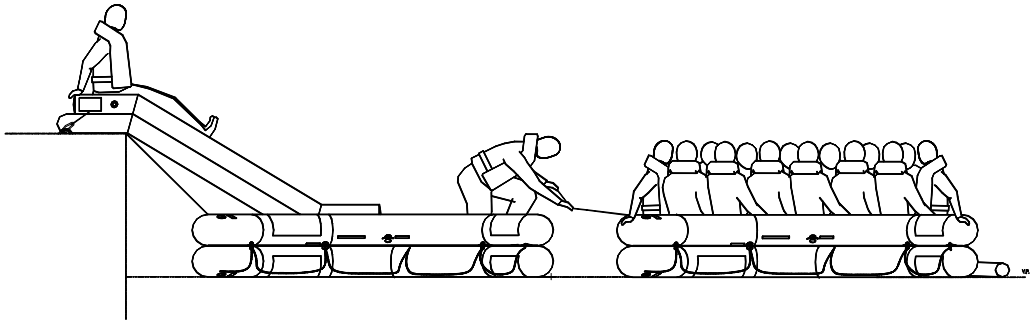


Figure 3.11D - Cutting free a full IBA (for vessels that carry more than one IBA per side).

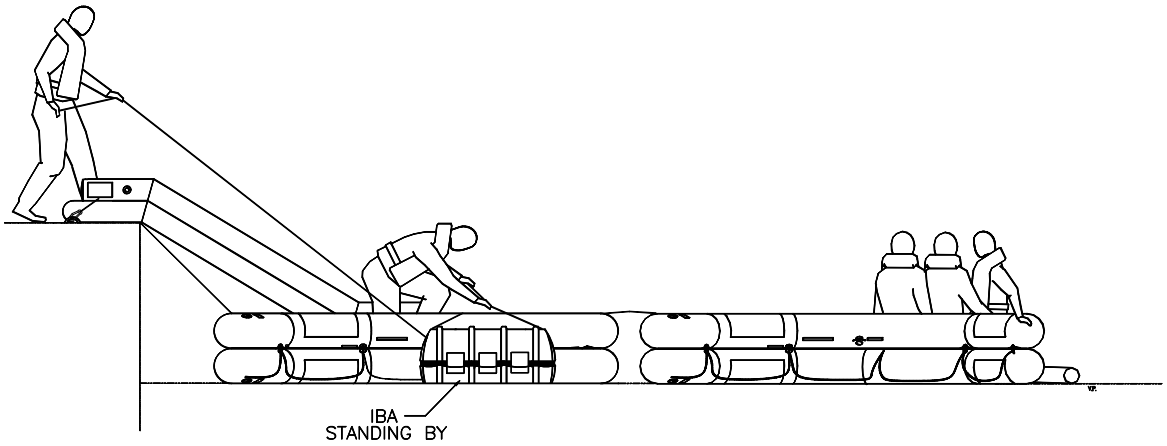


Figure 3.11E - Getting ready an additional IBA - (for vessels that carry more than one IBA per side).

Once the additional IBA has been loaded, it is then cut away from the vessel and another IBA is deployed, bowsed in place, inflated and loaded.

Once there are no additional IBA's, proceed to STEP 9.

Step 9.

The System is now ready for evacuation of passengers. Have the passengers muster by the evacuation station wearing lifejackets, remove their shoes and be ready for evacuation (Figure 3.12).

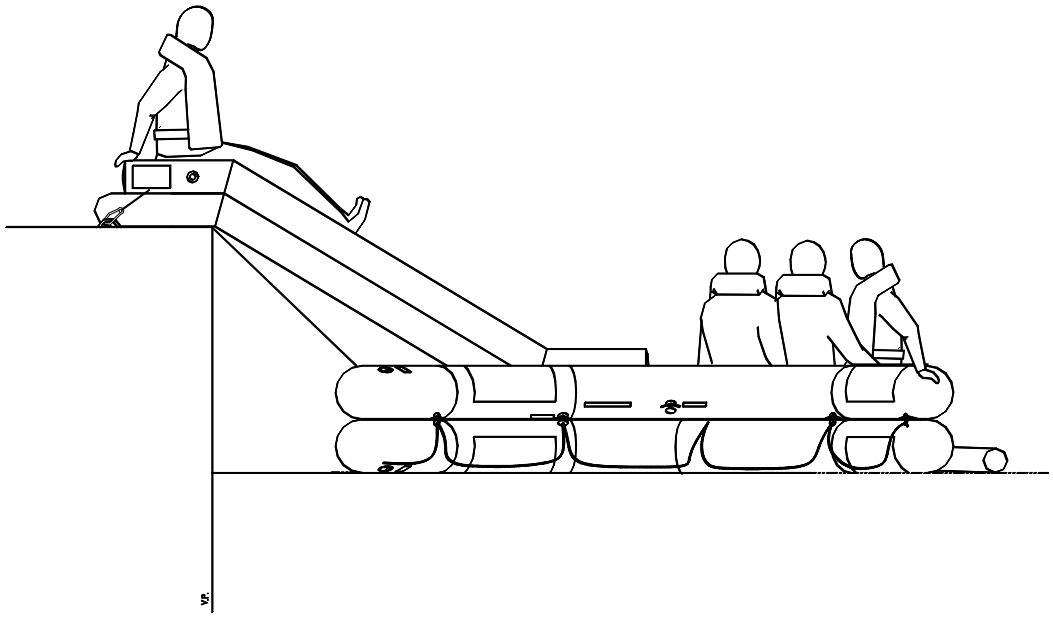


Figure 3.12 - Evacuating Passengers.

Step 10.

When evacuation is completed, disconnect the IBA from the slide by cutting the IBA free from the ship. This is done by disconnecting or cutting the slide connection line (Figure 3.13), and by cutting all the bowsing lines. There is a safety knife located in a clearly marked pocket at the end of the slide.

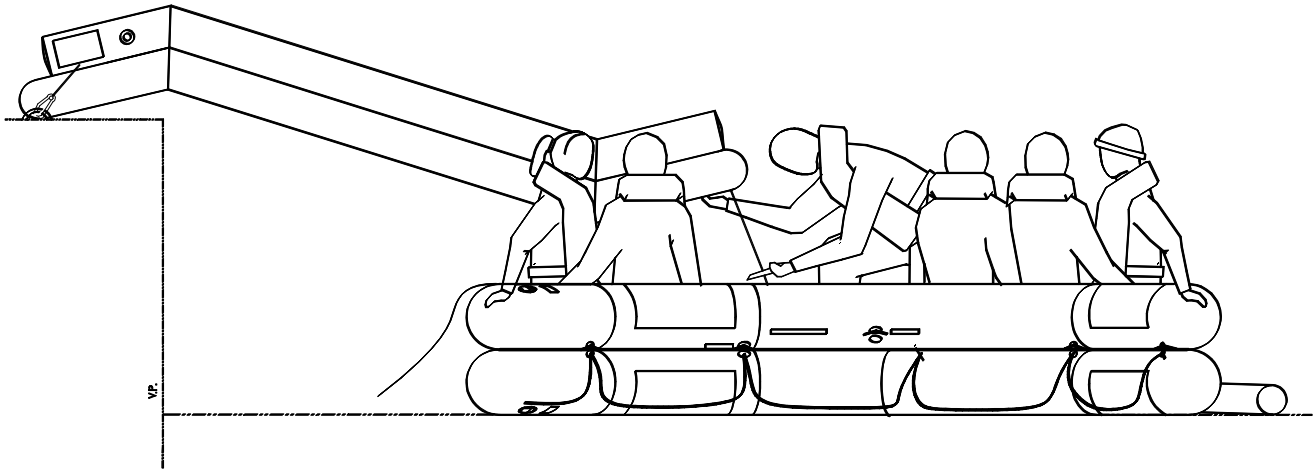


Figure 3.13 - Cutting away from the ship (Cutting the Slide away)

Evacuation is now finalized! Ensure that IBA is maneuvered away from the vessel!

4.0 COMPONENT DESCRIPTIONS (DEPLOYED)

Slide (SL25)

The MSS slide (SL25) is constructed of butyl or polyurethane fabric and is CO_2 inflated. The bottom of the slide has a short length of line with a snap hook that is to be connected to the IBA floor when boarded.

The slide is equipped with two bowsing lines in pouches at the top which can be used to tie the IBA alongside the vessel in the event of strong wind, current, or rough weather. In case of slide damage topping valves are installed to re-inflate the slide with a pump stored on the IBA. A floating knife is included at the bottom of the slide to sever the slide-IBA attachment if the crew member cannot unfasten the snap hook.

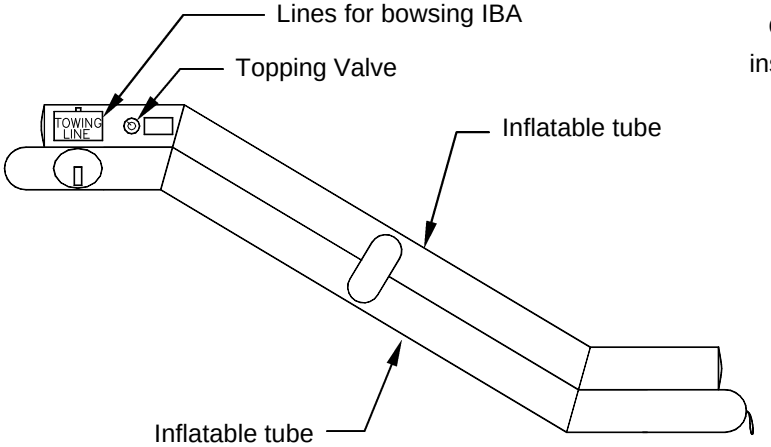


Figure 4.1 - Profile view of SL25.

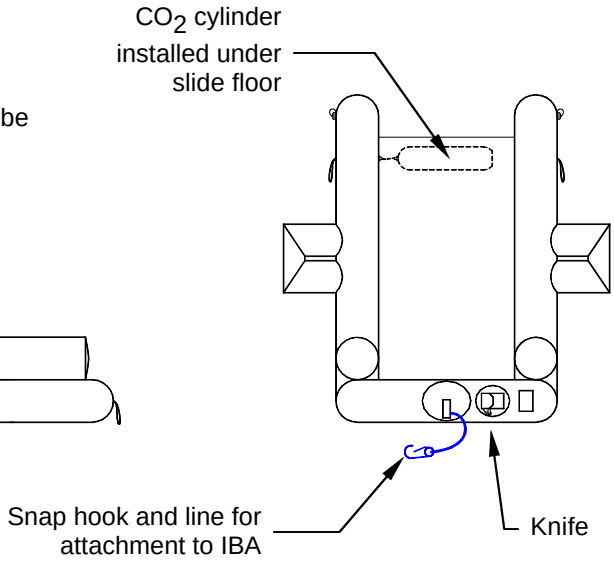


Figure 4.2 - Front view of SL25.

Slide (SL32)

The SL32 model is constructed from butyl or polyurethane fabric and is CO_2 inflated. It has similar features to the SL25 model and is detailed in Figure 4.3 and 4.4.

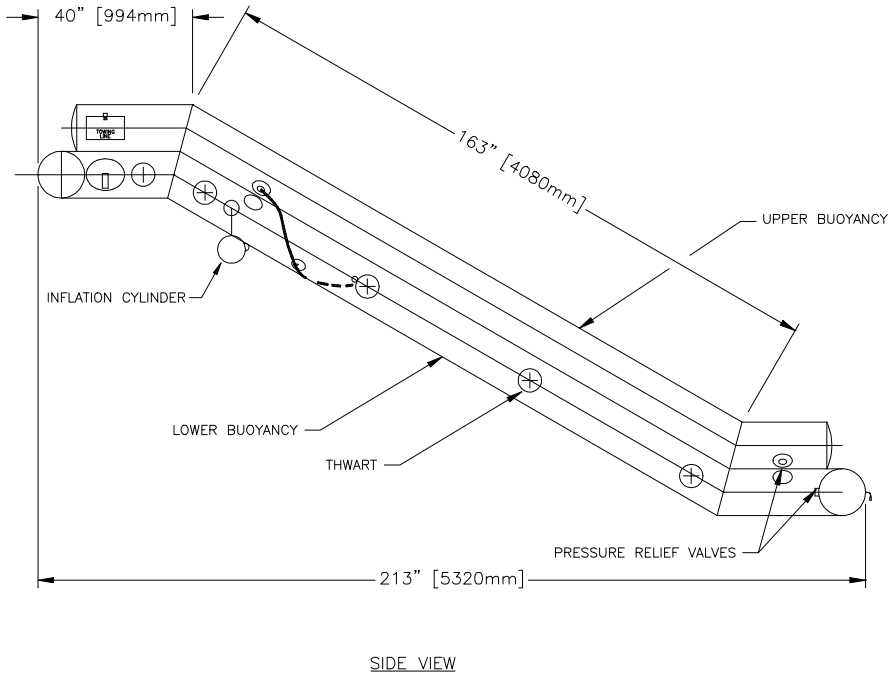


Figure 4.3 - Profile view of SL32.

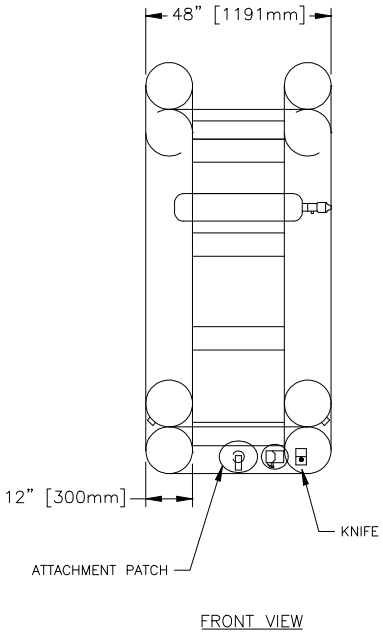


Figure 4.4 - Front view of SL32.

Slide (SL40)

The SL40 model is constructed from butyl or polyurethane fabric and is CO_2 inflated. It has similar features to the SL25 model and is detailed in Figure 4.5.

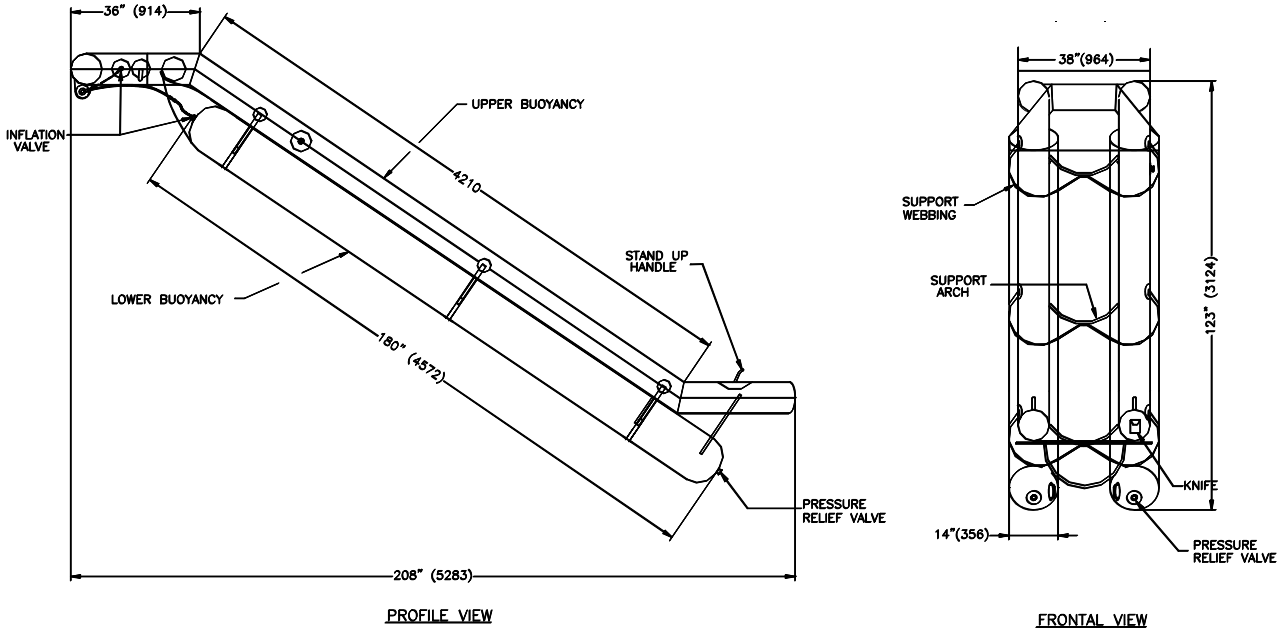


Figure 4.5 - SL40 model inflated

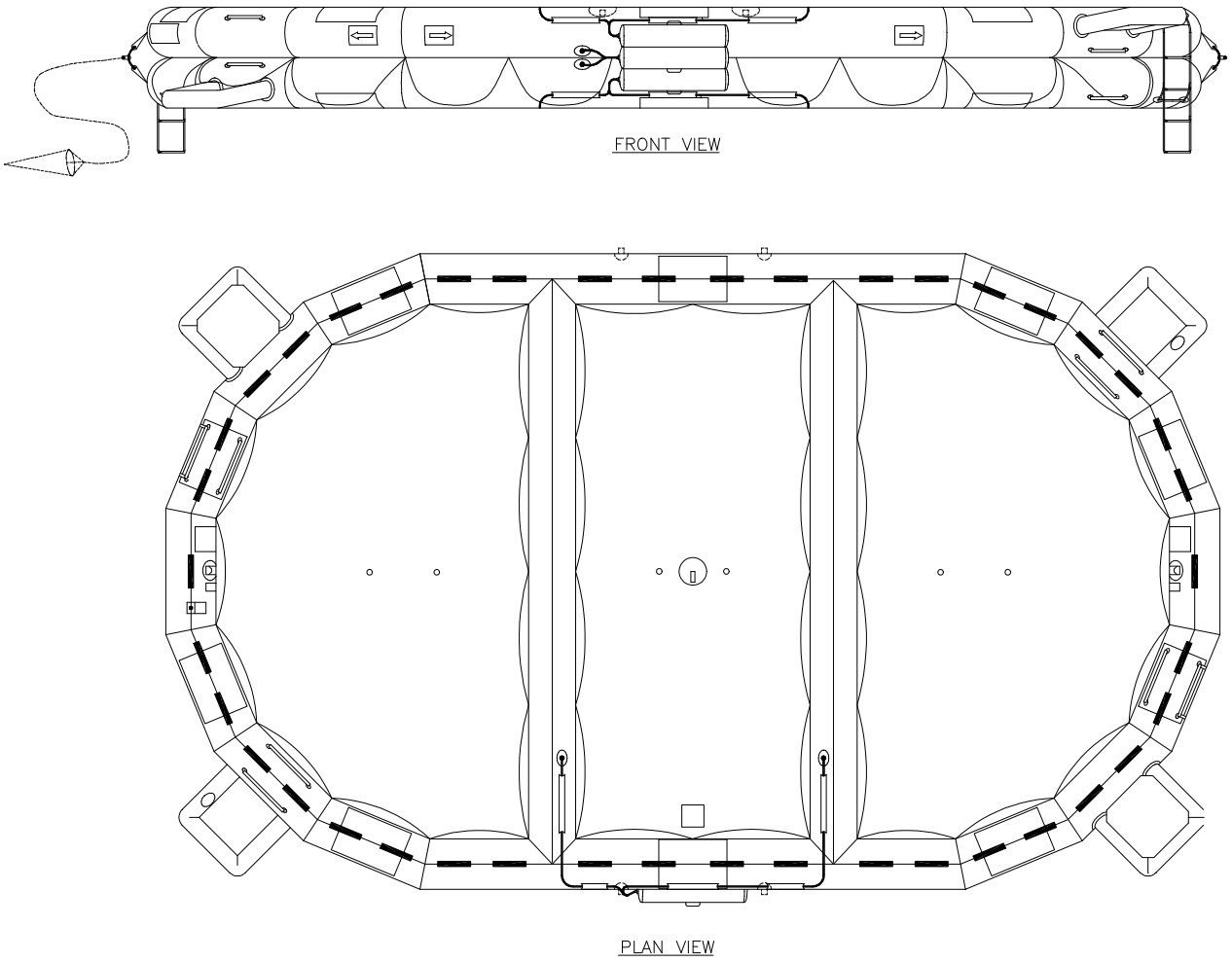


Figure 4.6 - 100/150 Person IBA

IBA's.

The100/150 person IBA (shown in Figure 4.6) is constructed of butyl or polyurethane fabric and is CO_2 inflated. An emergency pack, containing paddles (4), foot pumps (2), bailers (2), repair kit (1), leak stoppers (4), knife (1), flashlight (1) c/w spare bulbs (2) and batteries (3), whistle (1), sponges (2) and sea anchor (1), all stowed in a paddle bag, is fastened to the IBA along with towing lines. The 50/75 person IBA has similar features to the 100/150 IBA and is shown in Figure 4.7.

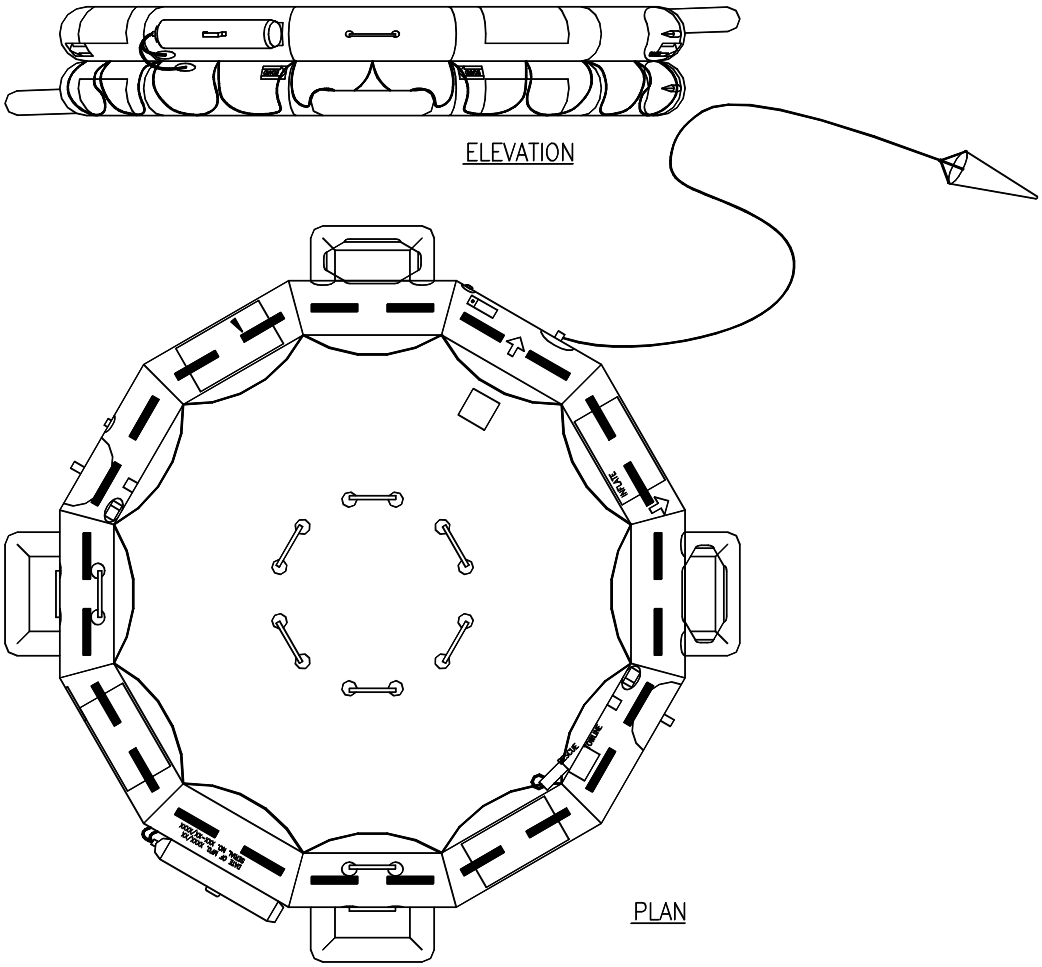


Figure 4.7 - 50/75 Person IBA

5.0 INSTALLATION:

The DBC Modular Slide System is simple to install and requires no major structural modifications to the vessel. All necessary modifications can be done without dry docking the vessel.
The installation consists of installing stowage cradles for the IBA's, pad eyes and cleats at the evacuation station. These may vary from vessel to vessel depending on the vessel capacity, geometry and construction.

6.0 CREW REQUIREMENTS:

The DBC Modular Slide System (MSS) is designed to be operated by two crew members per evacuation station. In the case of multiple IBA's per side, it is advised that the crew is increased depending on the number of IBA's. This increase will enable faster evacuation.

7.0 TRAINING:

DBC Marine Safety Systems offers extensive crew training at the time of MSS installation or at any time required by the customer. Since every vessel has different crewing configurations and requirements, DBC Marine is available to work with the ship's personnel to design the evacuation plan. Training will consist of actual deployments of the system so the crew can be familiarized with the system operation and system components.

8.0 MAINTENANCE:

As per regulations, each MSS system (slide and IBA) on the vessel must be inspected and serviced annually by an authorized service agent. Since installation is minimal, turn-around times can be as fast as 24 hours depending on vessel location.

9.0 REFERENCE MATERIAL:

Included are the following drawings;

1) General Arrangement - Evacuation Slide (SL25)
2) General Arrangement - Evacuation Slide (SL32)
3) General Arrangement - Evacuation Slide (SL40)
4) General Arrangement - 100 Person Inflatable Buoyant Apparatus
5) Geometric Data - 100 Person Inflatable Apparatus

DBC Marine Safety Systems
Modular Slide System (MSS)
Instruction Manual

MSS SL25/SL32/SL40 Combined with
100/150 IBA or 50/75 IBA

As Supplied to:

_____

_____

_____

Date:_____